

# Streams and Wetlands: 401 Certification & Mitigation Banks in Texas

Brad Caston, TCEQ

Telephone: (512) 239-4711

E-mail: [Charles.Caston@tceq.texas.gov](mailto:Charles.Caston@tceq.texas.gov)

So you want to build something?













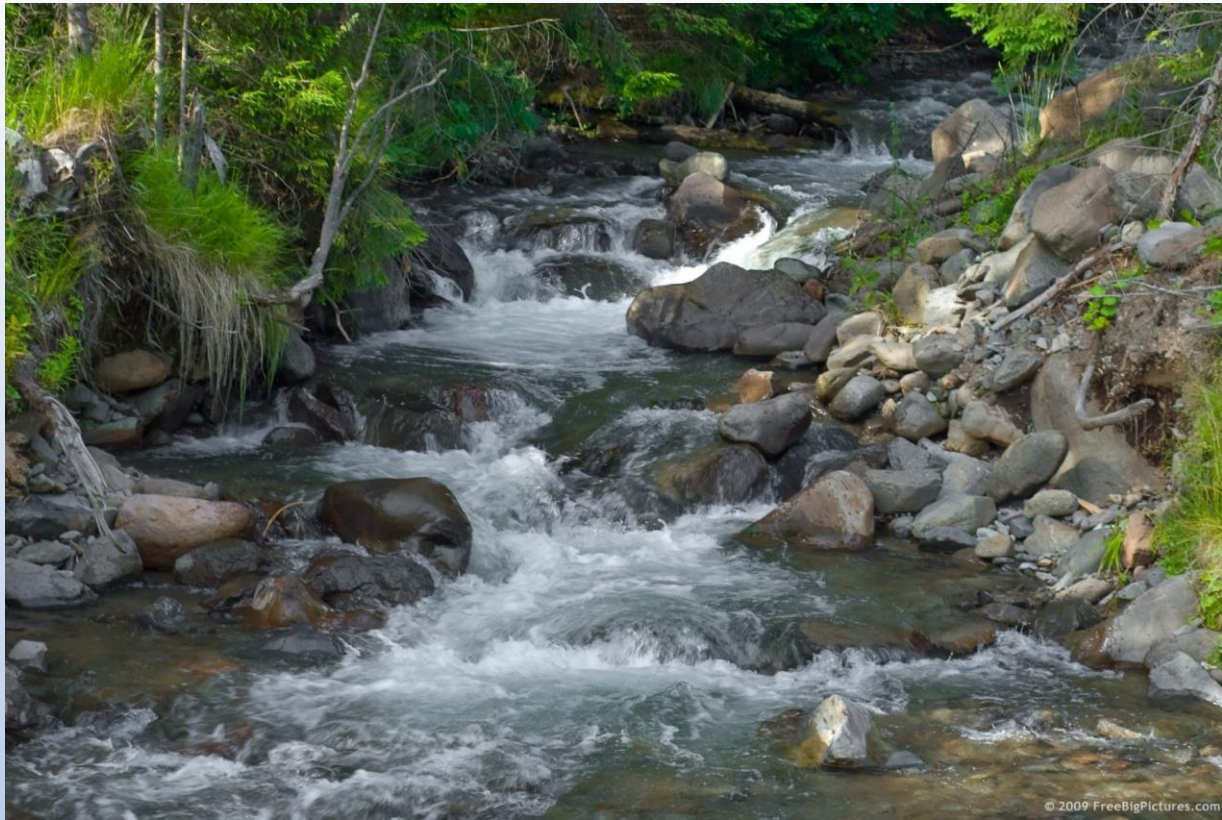














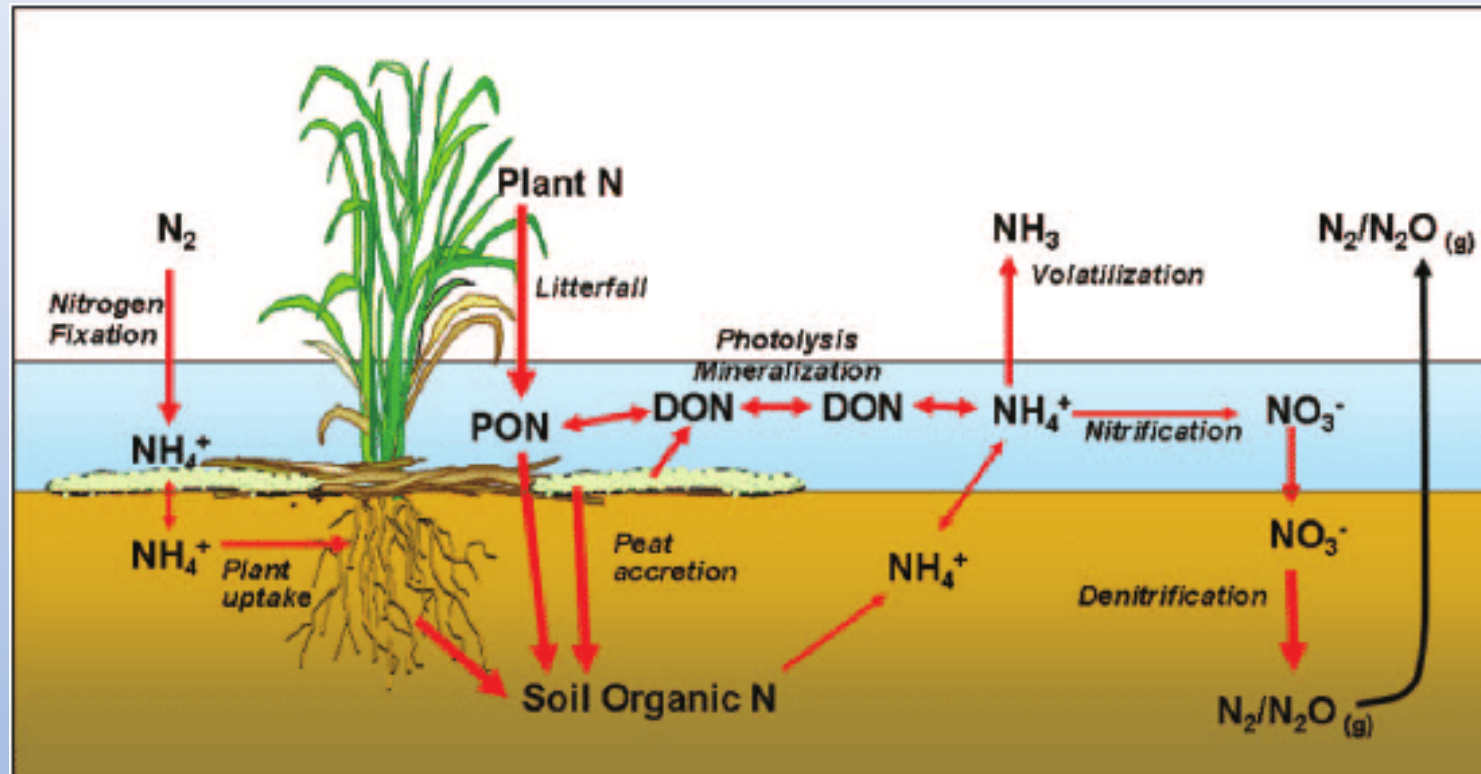
# You need a permit

- 404 permit
- 401 certification
- Nation's waters, navigable waters and territorial seas, WOTUS

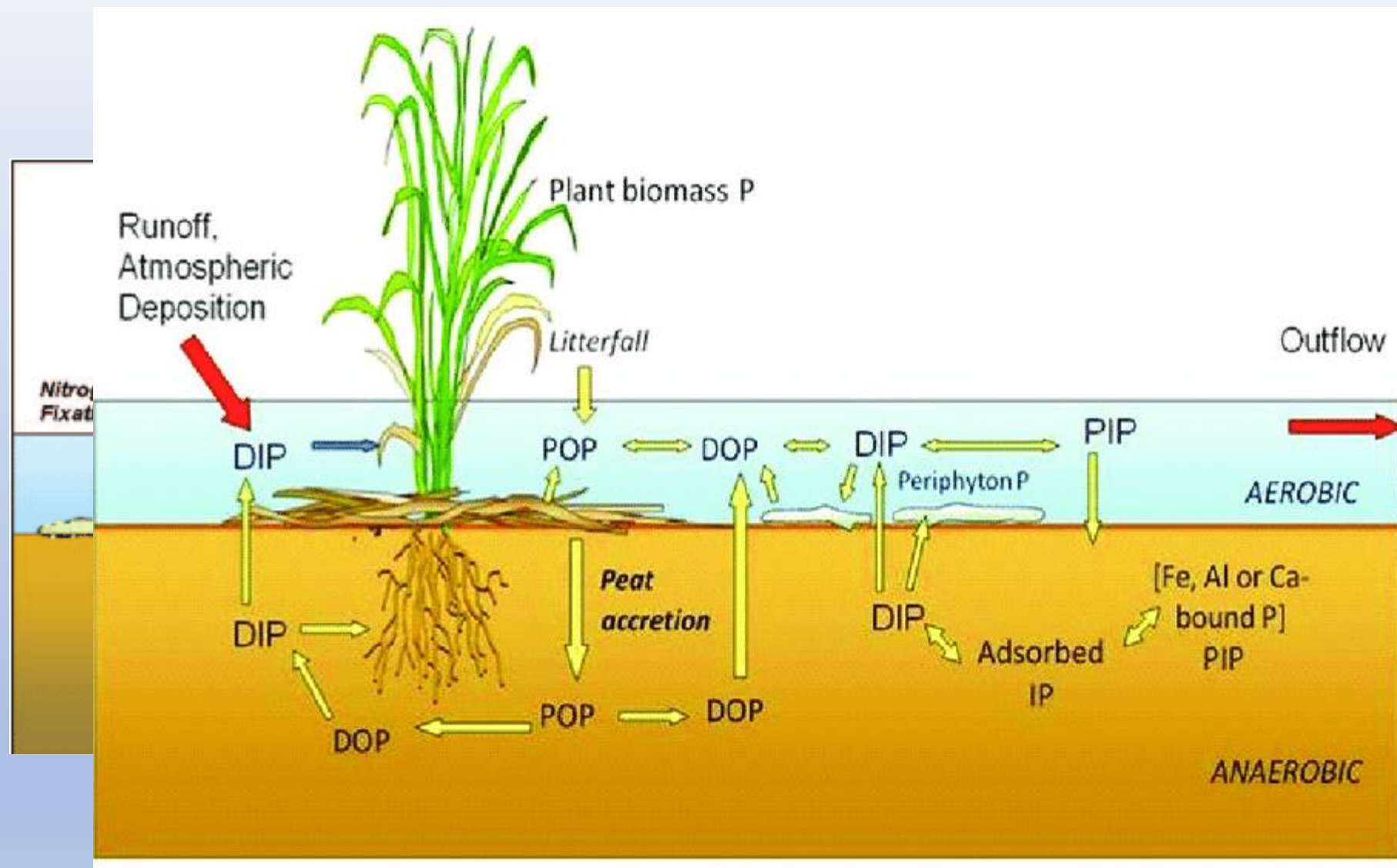


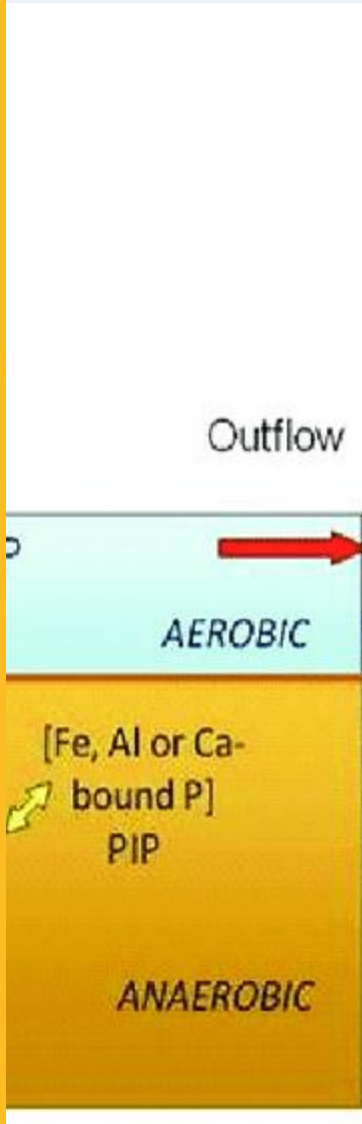
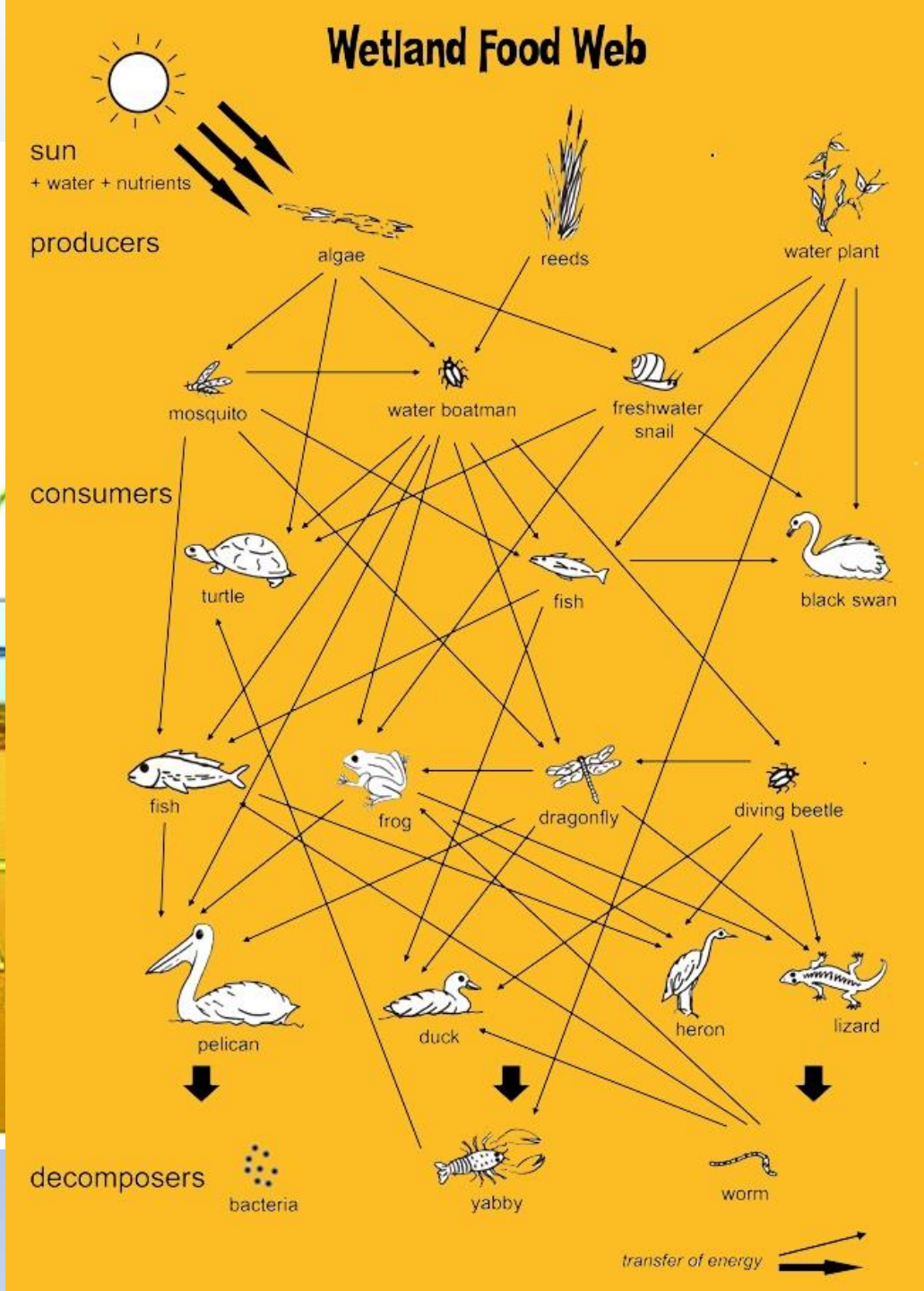
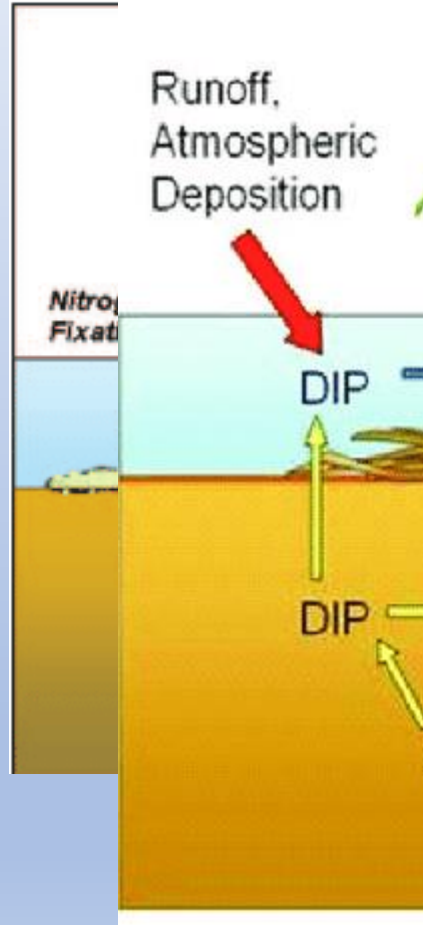
Why protection of aquatic resources is important





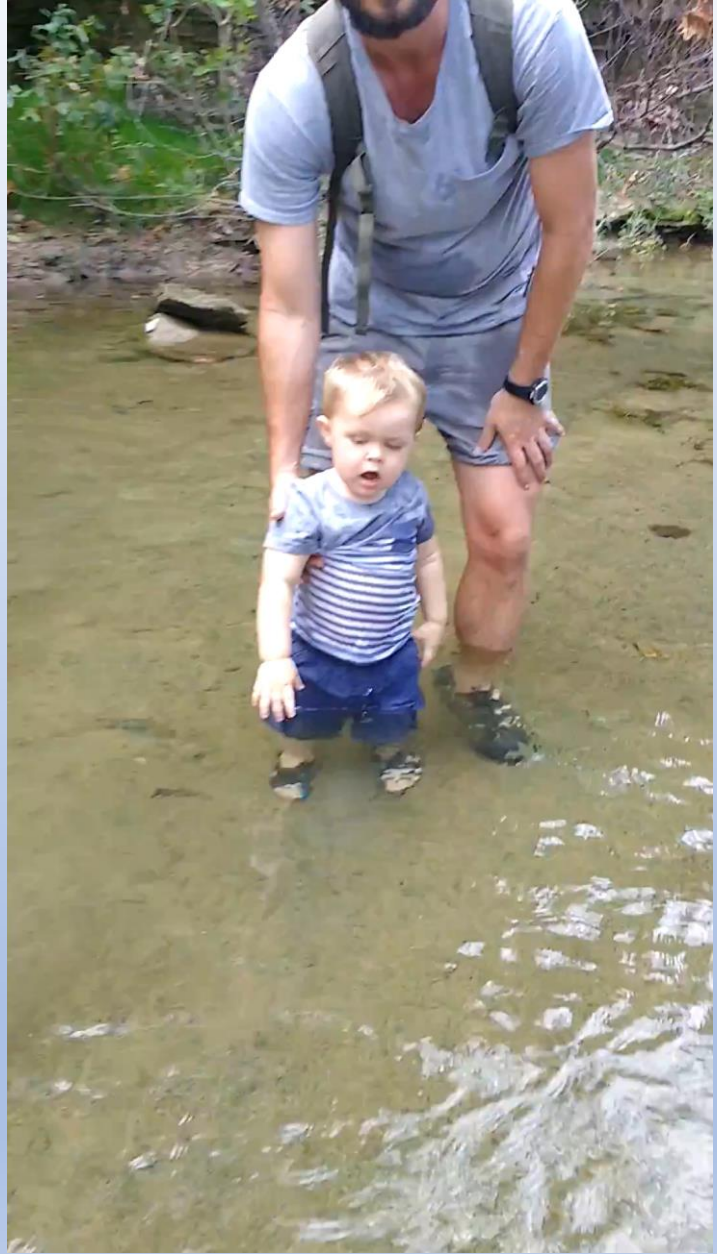








Function	Goods and services
Recharge groundwater	Increased water supply
Water quality control	Reduced costs of water treatment
Habitat for aquatic species	Commercial and recreation fisheries
Habitat for birds and wildlife	Hunting, bird watching, other recreational
Biomass export	Food, fibers, fisheries
Flood control and buffering	Reduced incidence, severity, and and cost of flooding

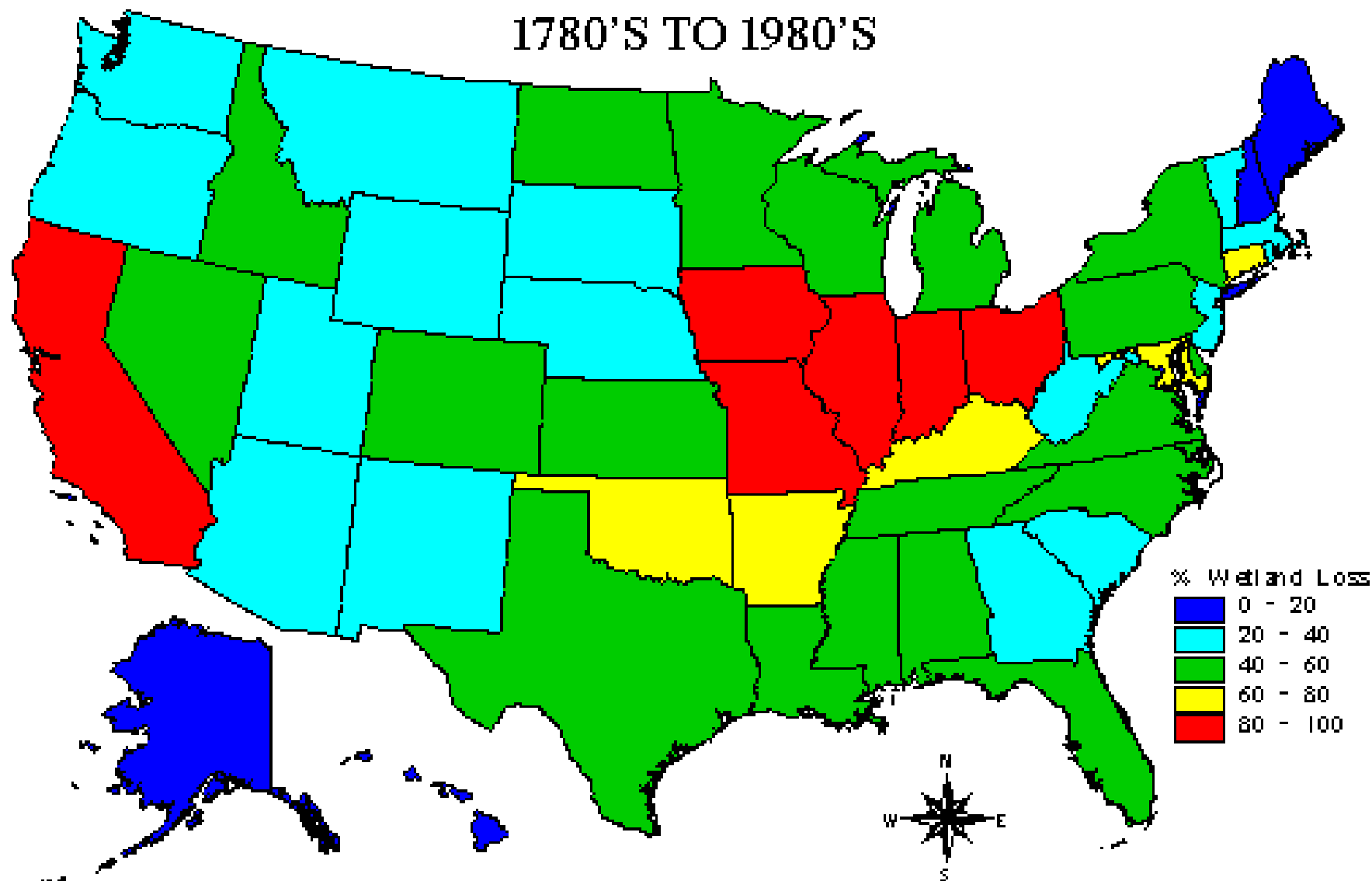




# SMALL STUFF MATTERS

- The Role of Headwaters in Downstream Water Quality. Alexander et al. 2007
- Small streams affect to larger rivers, including navigable waters:
  - 55% of mean-annual water volume
  - 40% nitrogen flux
- Profound influence water quantity and water quality of larger rivers

# WETLAND LOSSES IN THE UNITED STATES 1780'S TO 1980'S





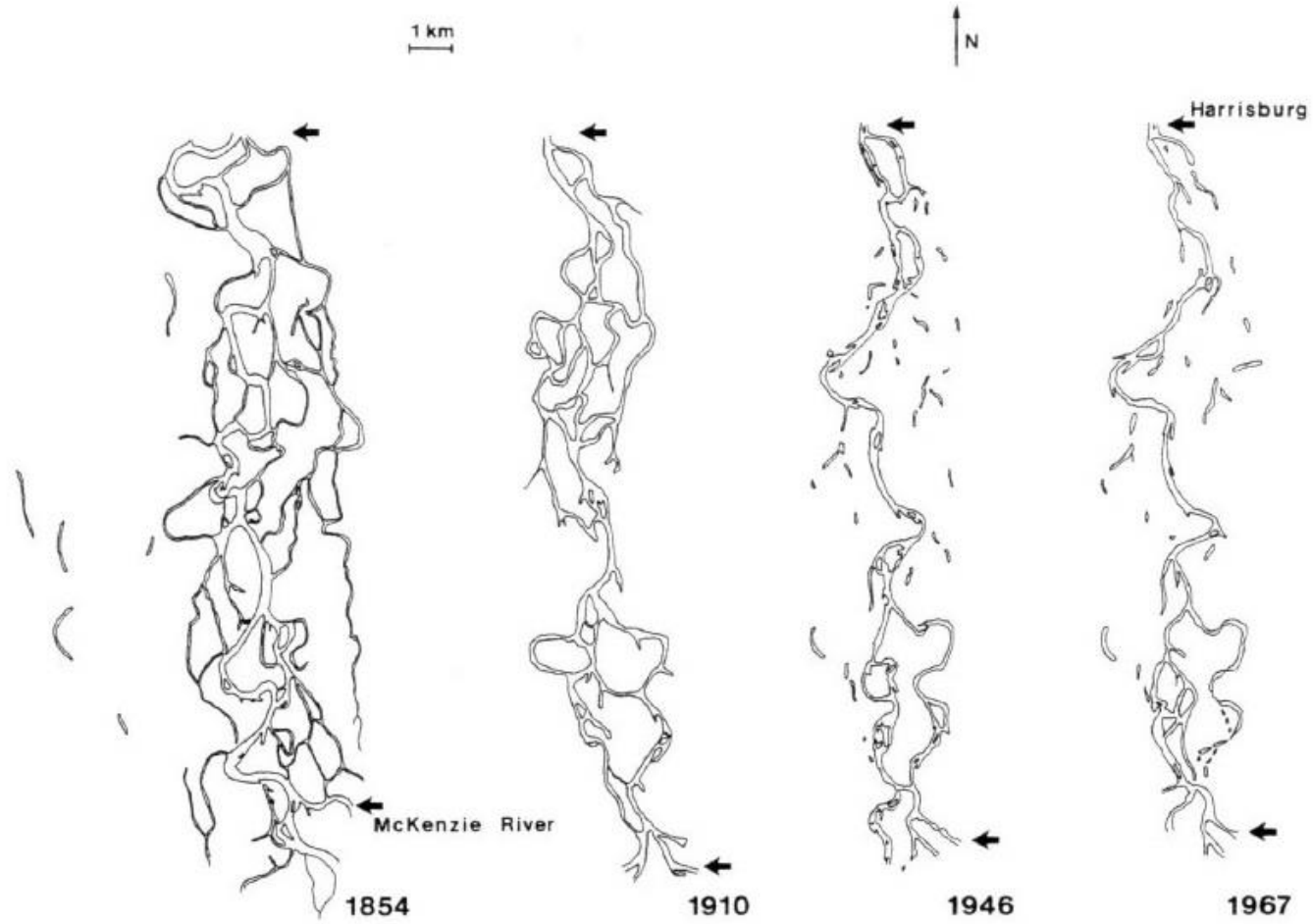


Fig. 2. The Willamette River from the McKenzie River confluence to Harrisburg, showing reduction of multiple channels and loss of shoreline 1854–1967.

# Federal Water Pollution Control Act, 1948

- Amendments in 1972 = CWA



# Federal Water Pollution Control Act, 1948

- Section 404 of CWA:
- Permit, Alternatives, Avoidance, Mitigation
- Dual Authority: Corps and EPA

# Federal Water Pollution Control Act, 1948

- Section 401 of CWA:



# Who am I?



PHIL  
MOTIV

*"Look if I have to explain the meaning  
of existence, then it isn't funny."*

# Standards Implementation Team

- Water Quality Division
- 401 program



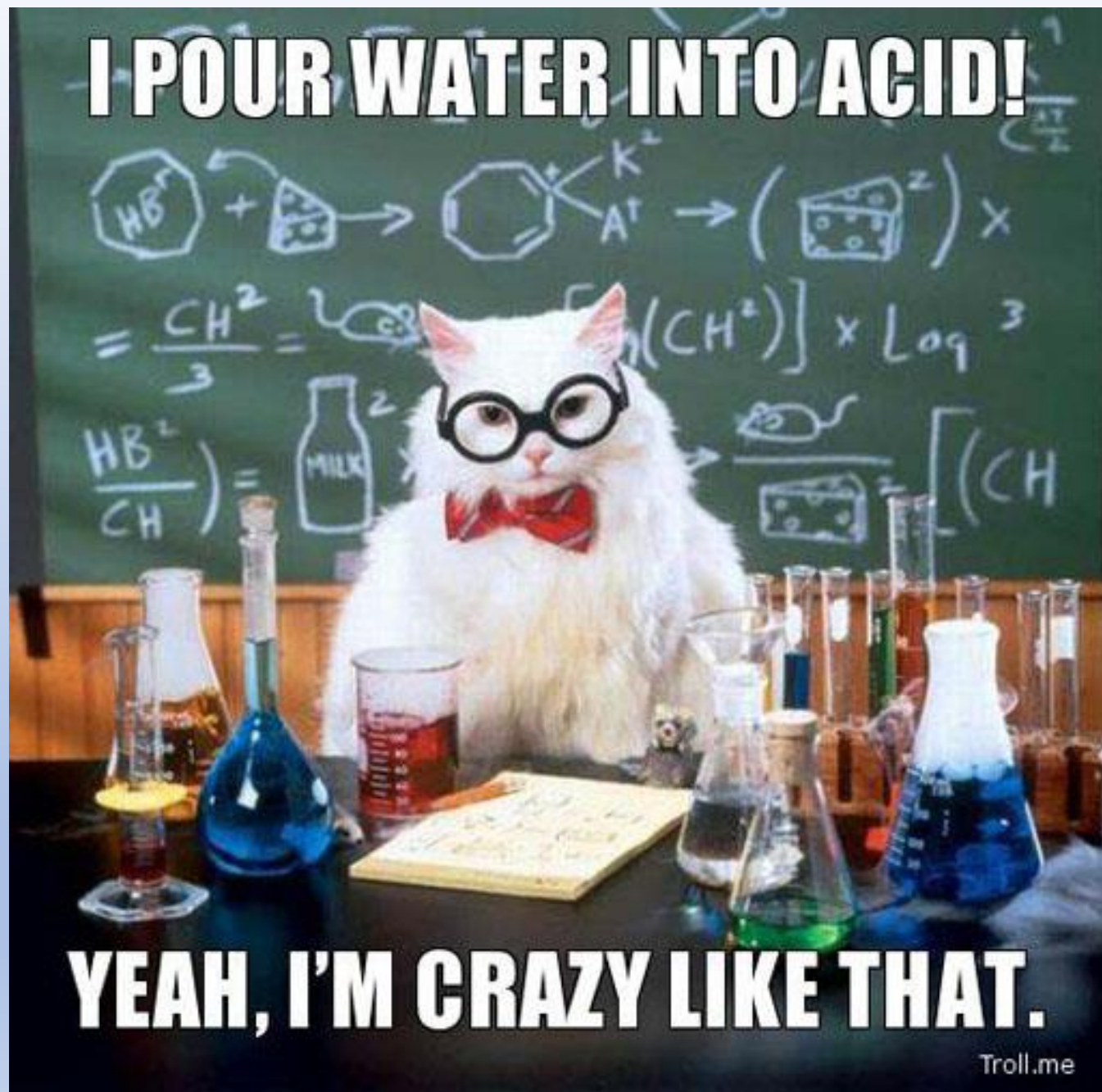
# How to avoid getting a 401 certification



# Do like you oughta, don't add dirt to water

- Don't get a 404 permit
- NWPs
- Tier I individual permit

**I POUR WATER INTO ACID!**



**YEAH, I'M CRAZY LIKE THAT.**



# Tier II 401 water quality certification

- 1) Alternatives analysis
- 2) Minimize impacts
- 3) State water quality standards
- 4) Mitigation for impacts = \$\$\$

# Mitigation for Impacts

- Past and present
- 2008 Mitigation Rule
- Effects and cost
- IRT

# WOTUS = WAR

- U.S. Code Title 33, Chapter 26, Subchapter V, Section 1362, Item 7:
  - The term “navigable waters” means the waters of the United States, including the territorial seas.
- Many courts cases and battles
- SWANCC vs U.S. Army Corps (2001)
- Rapanos vs United States (2006)
- 2015 and 2019 WOTUS definition revisions.



# Other recent guidance

- ASWM comment letter on “Revised Definition of WOTUS”
- Corps guidance on credit release schedule for MBs
- EO on promoting energy infrastructure and economic growth.

# Acknowledgements

- Lili Murphy, 401 WQ cert expert
- Contact info:
  - Brad Caston
  - [Charles.Caston@tceq.texas.gov](mailto:Charles.Caston@tceq.texas.gov)
  - 512-239-4711
  - [401CERTS@tceq.texas.gov](mailto:401CERTS@tceq.texas.gov)
- Corps Regulatory, Fort Worth
- Corps Regulatory, Galveston
- Corps Regulatory, Tulsa